



## Nonlinear PDEs in Continuum Mechanics International Workshop

CMAF/Universidade de Lisboa, 6-7 June, 2013

**Thursday, 6 June 2013, III\_Room B3-01**

9:30-10:15 "*Singular solutions of the Navier-Stokes equations*", Vladislav Pukhnachev (Lavrentiev's Institute of Hydrodynamics, Novosibirsk, Russia).

10:15-11:00 "*Nonhomogeneous incompressible Bingham fluid: regularity of a weak solution*", Vladimir Shelukhin (Lavrentiev's Institute of Hydrodynamics, Novosibirsk, Russia).

11:15-12:00 "*Mathematical models of a wormhole formation*", Anvar Meirmanov (Kazakh-British Technical University, Almaty, Kazakhstan).

*LUNCH*

13:30-14:15 "*Optimal Regularity for the Obstacle Problem*", John Andersson (KTH, Stockholm, Sweden).

14:45-15:30 "*Models of viscous fluids with variable exponents: Results and Open Problems*" or "*Generalized Navier-Stokes equations with anisotropic dissipation*", Hermenegildo Oliveira (CMAF & University of Algarve).

15:30-16:15 "*Complex Ginzburg-Landau equation with absorption: existence and localization properties*", Stanislav Antontsev (CMAF, University of Lisbon).

Apoio:  
**FCT**  
Fundação para a Ciéncia e a Tecnologia

Seminário financiado por Fundos Nacionais através da FCT – Fundação para a Ciéncia e a Tecnologia no âmbito do projeto **PEst-OE/MAT/UI0209/2013**



Local:  
**INSTITUTO PARA A INVESTIGAÇÃO INTERDISCIPLINAR**  
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### Friday, 7 June 2013, III\_Room B3-01

9:30-10:15. "The motion of the rigid body in a viscous fluid with collision", Nikolai Chemetov (CMAF, University of Lisbon).

10:15-11:00 "A class of electromagnetic  $p(x,t)$  -curl system: Existence, Blow up and finite time extinction", Lisa Santos (CMAT, Universidade do Minho).

11:15-12:00 "Biharmonic Equations with  $p(x,t)$  Laplacian and Memory Term: Existence, Uniqueness and Blow up", Jorge Ferreira (Federal University Rural of Pernambuco-UFRPE-UAG/Brasil).

### LUNCH

13:30-14:15 "Global  $L^2$ -solvability of a problem on the motion of a drop in an incompressible fluid without surface tension", Irina Denisova (Institute for Mechanical Engineering Problems, Russian Academy of Sciences, S. Petersburg)

14:15-15:00 "Parabolic equations with double variable nonlinearity", Sergey Shmarev (University of Oviedo, Spain).

15:30-16:15 "Finite Element Method for Equations and Systems of reaction diffusion type ", José Duque (University of Beira Interior).

16:15-17:00 "A variational approach to steady glacial flows", Rafayel Teymurazyan (CMAF/Universidade de Lisboa).

**Organizers:** Stanislav Antontsev and José Francisco Rodrigues  
(CMAF/Universidade de Lisboa)

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